

WHAT IS CLAIMED IS:

1. A device for processing packets in a network,  
comprising:

a receiver operable to receive a packet flow;

5 a detector operable to determine if the packet flow  
includes a pause;

a processor operable to adjust fragmentation of  
packets in the packet flow according to whether the  
packet flow includes the pause.

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2. The device of Claim 1, wherein the processor  
will not perform fragmentation of the packet flow in  
response to the packet flow including the pause.

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3. The device of Claim 2, wherein the processor  
will fragment those packets in the packet flow that  
exceed a predetermined network size.

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3. The device of Claim 1, wherein the processor  
performs fragmentation of the packet flow in response to  
the packet flow not including the pause.

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4. The device of Claim 3, wherein the processor  
fragments those packets of the packet flow that exceed a  
predetermined local state size.

5. The device of Claim 4, wherein the predetermined  
local state size is associated with a different packet  
flow.

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6. The device of Claim 1, wherein the receiver receives a plurality of packet flows, the detector operable to determine if each of the packet flows includes a pause, the processor operable to adjust  
5 fragmentation of each of the plurality of packet flows according to whether any of the packet flows includes the pause.

7. The device of Claim 6, wherein a first one of  
10 the plurality of packet flows includes a relatively short pause, a second one of the plurality of packet flows includes a relatively long pause, the processor operable to perform fragmentation of the first and second ones of the packet flows according to characteristics associated  
15 with the first one of the plurality of packet flows.

8. The device of Claim 7, wherein the processor is operable to perform fragmentation of the second one of the plurality of packet flows according to  
20 characteristics associated with the second one of the plurality of packet flows in response to termination of the first one of the plurality of packet flows.

9. The device of Claim 1, wherein a packet of the  
25 packet flow indicates whether the packet flow includes the pause.

10. The device of Claim 1, wherein the detector is operable to determine whether the packet flow includes  
30 the pause in response to a receipt frequency of packets in the packet flow.

11. A method for processing packets in a network,  
comprising:

receiving a packet flow;

determining if the packet flow includes a pause;

5 adjusting fragmentation of packets in the packet  
flow according to whether the packet flow includes the  
pause.

12. The method of Claim 11, further comprising:

10 performing fragmentation of packets in the packet  
flow in response to the packet flow not including the  
pause.

13. The method of Claim 12, further comprising:

15 fragmenting those packets in the packet flow  
exceeding a predetermined size.

14. The method of Claim 11, wherein the  
predetermined size is associated with a state  
20 characteristic of the packet flow.

15. The method of Claim 13, wherein the  
predetermined size is associated with a state  
characteristic of a different packet flow.

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16. A system for processing packets in a network,  
comprising:

means for receiving a packet flow;

5 means for determining if the packet flow includes a  
pause;

means for adjusting fragmentation of packets in the  
packet flow according to whether the packet flow includes  
the pause.

10 17. The system of Claim 16, further comprising:

means for performing fragmentation of packets in the  
packet flow in response to the packet flow not including  
the pause.

15 18. The system of Claim 17, further comprising:

means for fragmenting those packets in the packet  
flow exceeding a predetermined size.

19. The method of Claim 16, further comprising:

20 means for receiving a plurality of packet flows, a  
first one of the plurality of packet flows associated  
with a pause, a second one of the plurality of packet  
flows associated with no pause or a pause shorter than  
that of the first one of the plurality of packet flows;

25 means for fragmenting packets of the first and  
second ones of the packet flows according to state  
characteristics associated with the second one of the  
plurality of packet flows.

30 20. The method of Claim 16, wherein the determining  
means includes means for determining a receipt frequency  
of packets in the packet flow.

21. A system for processing packets in a network, comprising:

5 a sender operable to place information in packets of a packet flow, the sender operable to provide an indication as to whether the packet flow includes a pause;

10 a linking device operable to receive the packet flow from the sender, the linking device operable to adjust fragmentation of packets in the packet flow according to whether the packet flow includes the pause;

a receiver operable to receive the packet flow from the linking device.

22. The system of Claim 21, wherein the sender is operable to identify the pause in the information.

23. The system of Claim 22, wherein the sender is operable to classify the pause identified in the information.

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24. The system of Claim 23, wherein the pause is classified according to whether one or more predefined limits are exceeded.

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25. The system of Claim 24, wherein the sender is operable to adjust one or more bits of a packet in the packet flow to indicate a presence and a classification of the pause.

26. A computer readable medium including code for processing packets in a network, the code operable to:

receive a packet flow;

determine if the packet flow includes a pause;

5        adjust fragmentation of packets in the packet flow  
according to whether the packet flow includes the pause.

27. The computer readable medium of Claim 26,  
wherein the code is further operable to:

10        perform fragmentation of packets in the packet flow  
in response to the packet flow not including the pause.

28. The computer readable medium of Claim 27,  
wherein the code is further operable to:

15        fragment those packets in the packet flow exceeding  
a predetermined size.

29. The computer readable medium of Claim 26,  
wherein the predetermined size is associated with a state  
20        characteristic of the packet flow.

30. The computer readable medium of Claim 26,  
wherein the predetermined size is associated with a state  
characteristic of a different packet flow.